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(71)Applicant : EATON CORP

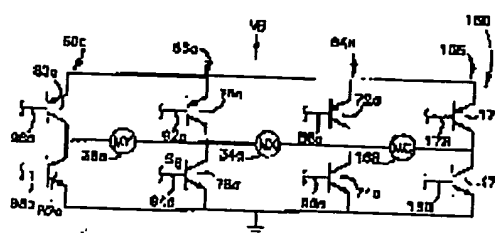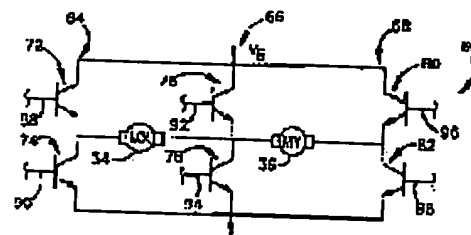(72)Inventor : FORTUNE GLENN C
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(30)Priority

Priority number : 93 27836   Priority date : 08.03.1993   Priority country : US

(54) MOTOR CONTROLLER OF SHIFT MECHANISM FOR TRANSMISSION

(57)Abstract:

PURPOSE: To provide a motor controller reducing the manufacturing cost by controlling the operation of a plurality of electric motors by the minimum number of switches.

CONSTITUTION: An electrically actuated shifting mechanism is provided with a rail select electric motor 34 and an in-gear electric motor 36, one of motors 34, 36 can be actuated by three switch groups 64, 66, 68, the central switch group 66 and the one of the both-side switch groups 64, 68 constitutes two pairs of circuits, each pair of switch group can operate the rail select or the in-gear motor to decide the operation direction of the motor. In one embodiment, a motor control circuit also controls the operation of a main clutch motor 168. Four switch groups 64a, 66a, 68a, 166 are used to effect operation of the in-gear, rail select, and clutch motors 34a, 36a, 168 in desired directions and pulse width modulation is used to effect simultaneous and out-of-plane operation of the in-gear and main clutch motors 168.

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